

Appl. No. 10/550,841
Amdt. Dated April 30, 2009
Reply to Office Action of October 31, 2008

REMARKS/ARGUMENTS

Applicants respectfully request reconsideration of the prior art rejections set forth by the Examiner under 35 U.S.C. sections 102 and 103. Applicants respectfully submit that the prior art references of record, whether considered alone, or in combination, fail to either teach or suggest Applicant's presently claimed invention. More specifically, Applicants present invention is directed to new and improved electronic device structures for incorporating a fuel cell that provides electrical power for the electronic device. Advantageously, Applicants have discovered that various arrangements for the electronic device and fuel cell can optimally utilize energy by transferring heat that is incidentally generated by an electronic component or device so that the fuel cell can utilize this excess energy that was typically wasted in the past.

Applicants have modified independent claim 1 and the remaining independent claims and have added new independent claims to alternately define the invention and distinguish over the prior art cited by the Examiner. Specifically, Applicants note that independent claim 1 has been modified to specify that fuel or water that is used by the fuel cell transfer heat from the electronic device. Specifically, Applicants have modified independent claim 1 to specify that: fuel or water for the fuel cell transfer heat from the electronic device to another structure of the fuel cell.

Applicants note that the primary reference upon which the Examiner has relied for rejecting the claims, the Leboe publication is merely directed to a fuel-cell thermal management system and method which describes an embodiment wherein

Appl. No. 10/550,841
Amdt. Dated April 30, 2009
Reply to Office Action of October 31, 2008

incoming air passes through an inlet 34 and is subdivided into a plurality of different airstreams. One of the airstreams initially passes over a battery and a DC/DC power converter.

Paragraph 42 of this reference notes that both of these components are relatively sensitive to temperature fluctuations and should be maintained at a relatively cool operating temperature for best performance. Accordingly, this reference teaches to those of ordinary skill in the art that the outside air should be utilized to maintain a constant temperature for electronic devices of the system. In contrast, Applicants have discovered that optimum energy utilization can be achieved by ensuring that heat that is incidentally generated by electronic components or elements of a system can advantageously be transferred to the fuel cell system.

Applicants' disclosure describes the use of either fuel, water, or air as the transfer mechanism for transferring heat. Accordingly, Applicants have modified independent claim 1 to specify that it is the fuel or water for the fuel cell that is the heat transfer mechanism for transferring the incidentally generated heat for use by the fuel cell system. Applicants submit that none of the references cited by the Examiner teach or suggest this advance in the art.

Additionally, Applicants have added new claims which alternately define and distinguish over the prior art by describing specific exemplary embodiments of the present invention. In particular, Applicants note that new claims have been added to specify the alternate embodiments of the invention wherein the electronic device

Appl. No. 10/550,841
Amdt. Dated April 30, 2009
Reply to Office Action of October 31, 2008

and/or a heat sink associated therewith is in contact with either the reformer, the fuel-cell, or the carburetor for the fuel cell system so that heat may be directly transferred to any of the structures.

Applicants respectfully submit that the prior art references cited by the Examiner provide no teaching or suggestion whatsoever regarding this advance in the art. Indeed, these references merely describe trying to maintain the electronic device at a specified temperature and therefore there is no motivation to place the electronic element adjacent any of the structures or to transfer heat from the electronic device to the specified structures.

Additionally, Applicants have added claims directed to the exemplary embodiments of the of the invention wherein the lamp of a projector system is the electronic component or heat generating element from which heat is transferred by any of the fuel, water, or air that is used by the fuel-cell system. Furthermore, as noted in the specification the lamp structure may advantageously be placed adjacent to any of the fuel-cell, carburetor, and/or reformer of the fuel-cell system in order to provide the direct transfer of heat.

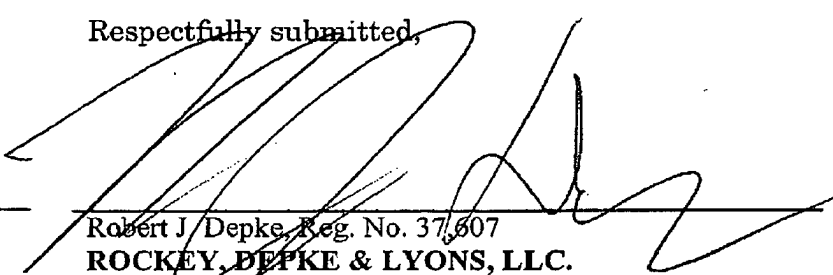
Appl. No. 10/550,841
Amdt. Dated April 30, 2009
Reply to Office Action of October 31, 2008

Applicant's respectfully submit that none of the references of record teach or suggest this advance in the art as well. Accordingly, in light of the foregoing, Applicant's respectfully submit that all claims now stand in condition for allowance.

The Commissioner is hereby authorized to charge any fees due or to credit any overpayment to Deposit Account No. 50-3891.

Respectfully submitted,

Date: 4/30/09


Robert J. Depke, Reg. No. 37,607
ROCKEY, DEPKE & LYONS, LLC.
233 S. Wacker Drive, Suite 5450
Chicago, Illinois 60606
Tel. (312) 277-2006
Attorneys for Applicant